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SOLID WASTE SECTION
ASHEVILLE REGIONAL OFFICE

S&ME

November 23, 2010

Ms. Deb Aja, Western District Supervisor
North Carolina Department of Environment and Natural Resources
Division of Waste Management
2090 U.S. Highway 70
Swannanoa, NC 28778

Reference: **TEN YEAR WASTE MANAGEMENT PLAN**
McGuire Nuclear Station Landfill #2 (Permit #60-04)
Duke Energy McGuire Nuclear Station
Mecklenburg County, North Carolina
S&ME Project No. 1411-09-097

Dear Ms. Aja:

On behalf of Duke Energy (Duke), S&ME, Inc. submits this Ten Year Waste Management Plan for the McGuire Nuclear Station Landfill #2 (Permit No. 60-04) as required by GS 130A-309.09D.

If there are any questions regarding this report, please contact me at 828-687-9080, Ext. 315.

Sincerely,
S&ME, Inc.

William M. Miller

William M. Miller, PE
Senior Project Engineer

S:\2009 PROJECTS\1411\ENVIRONMENTAL PROJECTS\11 09 097 Duke Energy Environmental Engineering Services\Triennial Waste Reduction Plans to DENR-Oct 2010\2010 Plans\MNS LF\MNS - Landfill Waste Reduction Plan 2010.doc

cc:

Duke Energy
PO Box 1006
Charlotte, NC 28201-1006
Attn: Andy Tinsley, Mail Code EC13K

Duke Energy
McGuire Nuclear Station
13339 Hagers Ferry Road
Huntersville, NC 28078
Attn: Mr. Robert Sapp

Facility Name	McGuire Nuclear Station Landfill #2
Permit #	60-04
Location	Mecklenburg County
Permit Issuance Date	July 7, 2009; Revised August 17, 2009. The permit is subject to review every five years.

Waste Management Plan Period

The period of the Waste Management Plan presented is for a ten year period. The yearly period used for the plan corresponds to the period July 1 through June 30 for the respective year.

Description of Waste Disposed in Landfill

The landfill receives the following types of material:

- Asbestos,
- Insulation (Non-Asbestos),
- Conventional Wastewater Sludge (WC),
- Empty Containers,
- Petroleum Product Spill Cleanup Materials,
- Oil Contaminated Materials (filters, rags, brush, shrubs,)
- Fish Waste,
- Non-Hazardous Excess, Obsolete, Expired Chemicals.

Expected Annual Waste Quantities For Ten Year Phase

The McGuire landfill was designed to receive 5000 cubic yards of waste per year. Using an estimated waste density of 90 lb/ft^3, the annual design waste volume would be equal to 6,075 tons.

The yearly periods listed below correspond to the period July 1 through June 30 for the respective year. The quantities listed in the table below are indentified as actual or expected.

Year	Year or Period	Annual Quantity (Actual or Expected)	
Year 1	2009-2010	4,356.74 tons	(Actual)
Year 2	2010-2011	6,075 tons	(Expected)
Year 3	2011-2012	6,075 tons	(Expected)
Year 4	2012-2013	6,075 tons	(Expected)
Year 5	2013-2014	6,075 tons	(Expected)
Year 6	2014-2015	6,075 tons	(Expected)
Year 7	2015-2016	6,075 tons	(Expected)
Year 8	2016-2017	6,075 tons	(Expected)
Year 9	2017-2018	6,075 tons	(Expected)
Year 10	2018-2019	6,075 tons	(Expected)

Expected Years of Disposal Capacity

The landfill has an estimated design capacity (airspace) of 202,652 cubic yards. Using an estimated waste density of 90 lb/ft^3, the capacity measured in tons would be 246,222 tons. In addition to tracking the tons of waste placed in the landfill, Duke performs an annual topographic survey of the surface of the waste placed in the landfill. Until 2009, the survey was performed in December. Beginning in 2010 the survey was performed towards the end of June to correspond with the July 1- June 30 period. Subsequent annual topographic surveys will be performed at the end of July.

As of June 23, 2010, approximately 47,228 cubic yards of waste had been disposed in the landfill.

The remaining capacity of the landfill is calculated below:

202,652 cubic yards	Design Capacity
- 47,228 cubic yards	Waste Placed through June 23, 2010
155,424 cubic yards	**Remaining Capacity**

Using the design disposal rate of 5000 cubic yards of waste per year, the expected years of disposal capacity is calculated as follows:

Years of Disposal Capacity at Expected Annual Rate

$$\frac{\textbf{155,424 cubic yards Remaining Capacity}}{\textbf{5,000 cubic yards/year}} = \textbf{31.1 Years of Disposal Capacity}$$

Options for Management and Reduction of Wastes

Options for management and reductions of wastes placed in the McGuire landfill are limited due to the sources of waste placed in the landfill. The quantities of certain waste streams that are associated with the power production and operation of McGuire (i.e. asbestos, insulation, Conventional Wastewater Sludge, fish waste) will likely remain at generally constant levels through the life of the landfill.

All Duke Energy Carolinas facilities, including McGuire, adhere to corporate waste reduction initiatives at reducing waste sources and maximizing recycling. These goals are established and tracked annually. Corporate environmental audits are performed routinely on all Duke Energy facilities. A portion of this audit is focused on source reduction, reuse of materials, methods of disposal used, recycling programs, and overall amount of material recycled.

Waste Management Strategy – Plans for Waste Reduction and Disposal

McGuire has reduced the volume of waste placed in the landfill through corporate goals aimed at reducing waste sources and maximizing reuse and recycling. In addition to the overall reduction of waste and recycling, Duke has reduced the volume of material placed in the landfill by using oil contaminated soil as cover material. McGuire has reduced the volume of expired or obsolete chemical disposed in the landfill by participating in corporate programs designed to identify alternative uses for these chemicals. Duke partners with schools, colleges, waste brokerages, and small industries to determine uses for these chemicals.

Duke strives to reduce the volume of petroleum product spill cleanup material through corporate efforts to reduce the number of petroleum spills, thereby reducing the volume of this type of material placed in the landfill.